



# Prior knowledge Activation through the use of Effective Reading Strategies

Ouafaa Belouiza<sup>1</sup>, Abdelkhalk Er-Rechydy<sup>2</sup>, Bani Koumachi<sup>3</sup>

<sup>1</sup>PhD candidate, Department of English Studies, FLLA, Ibn Tofail University, Kenitra, Morocco

<sup>2</sup>PhD candidate, Department of English Studies, FLLA, Ibn Tofail University, Kenitra, Morocco

<sup>3</sup>Associate Professor, Department of English Studies, FLLA, Ibn Tofail University, Kenitra, Morocco

Corresponding Author: Ouafaa Belouiza, E-mail: [Ouafaa.belouiza@uit.ac.ma](mailto:Ouafaa.belouiza@uit.ac.ma)

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**Abstract**— *Prior knowledge plays a crucial role in students' performance when it comes to utilizing effective reading strategies. When students possess prior knowledge related to the topic they are reading about, they can make connections, draw upon their existing understanding, and engage in more meaningful comprehension. Having prior knowledge allows students to activate their schema, which refers to the mental framework of information and experiences they have already acquired. This schema acts as a foundation for new learning and helps students make sense of new information. For example, if a student has prior knowledge about the solar system, they can easily comprehend and retain new information about planets or space exploration. Moreover, prior knowledge enables students to predict and anticipate what they might encounter while reading. By activating their prior knowledge, students can generate hypotheses about the content of the text, which enhances their engagement and motivation.*



**Keywords**— *Prior Knowledge, Students' Performance, Schemata, Reading Strategies, Comprehension*

## I. INTRODUCTION

Connectionist approaches to foreign language instruction and learning assert that a learner's past knowledge is important. They contend that a learner uses the information in his previously existing stores to comprehend the inputs he will encounter in new learning settings. These methods acknowledge the significance of the reader's past knowledge when viewing reading as a learning process (Labiod, 2017).

Activating prior knowledge involves implementing activities and strategies to highlight students' existing knowledge about a topic. This process is crucial for reading comprehension, as it allows readers to draw inferences and recall previously stored information. Textual clues in writing activate schema, facilitating the understanding of new information. Additionally activating prior knowledge before reading, helps students to be prepared and ready to interact with the reading material through a set of reading

strategies that facilitate the task for students. each strategy best suits a given text type.

### 1.1. Schemata Activation and Teachers' Role

Schemata is defined as “the mechanism by which the readers access what they know and match it to the information in a text” (Rumelhart, 1982, as cited in Vacca, 2002, p. 20). Thus, schemata activation assists students in both decoding information and recalling the information. It refers to “the activities and strategies that are used to bring out what students already know about a topic” (Al-Faki & Siddiek, 2013, p. 44). We should activate our learners' background knowledge and schema in relation to the target text to build confidence and security within them. This can be achieved by describing photos, producing words relevant to the topic, writing words on the board and having students use them to make up a story, or showing students pictures linked to the text and having them narrate the story. These types of exercises familiarize students with the reading

exercise's topic and prepare them for the task (reading). They also assist pupils in setting expectations and arouse their interest in the topic of the written material. Harmer (1991) feels that we won't be able to persuade kids to appropriately interact with spoken and written content until their desire to read or listen has been stimulated. He believes that it is our obligation to pique students' attention and urge them to approach the material with enthusiasm, even when the subject matter is not instantly appealing to them.

Abraham (2002) states that teaching reading “demands that the teachers activate the students' schema during the pre-reading phase by helping students recognize the knowledge that they already have about the topic of a text” (Abraham, 2002, p. 6). Floyd Carrell and (1987) also suggest that teachers must provide their pupils with the schemata that they need, as well as assist them in building bridges between existing knowledge and new knowledge. Similarly, Al-Issa (2006) states that reading teachers must consider the fact that any written material requires prior knowledge. As a result, reading teachers should assist students in activating prior information through problem-solving, creative, interpretative strategies that allow them to use whatever knowledge or resources they have. Teachers assist students in becoming competent readers by training them to activate and utilize their existing knowledge (Al-Jahwari & Al-Humaidi, 2015). According to (Siddiek & Alfaki, 2013), part of the teacher's role in observing instruction as an instructor is to see if students' prior knowledge has been activated. In other words, looking for instructional techniques, classroom management procedures, grade-level content, and the development of background knowledge isn't enough. To put it all together, you'll need to pay close attention to how background knowledge is used during a lesson. A close look at spreading activation should be paid to comprehend how background knowledge activation works.

The importance of prior knowledge, then, has three major implications for the teacher: first, the teacher must consider the knowledge that any written text is based on. Second, a significant part of the reading process is missed if a reader does not actively use his or her prior knowledge. Third, teachers' primary goal should be to help students develop problem-solving, creative, and interpretive strategies that allow them to use whatever knowledge or resources they have. As a result, teachers can assist students in becoming better readers by teaching them how to activate and use their prior knowledge.

## **1.2. The Role of Schemata Operate in Reading Comprehension**

In the process of reading, “comprehension of a message entails drawing information from both the text and the

internal schemata until sets are reconciled as a single schema or message”(Anderson et al. as cited in Hudson, 1982, p.187). In fact, this appears to emphasize one of the fundamental assumptions behind the concept of schema theory. When we are presented with new information, schemata that are relevant to that information come into play (or are activated) right away to help this information and make sense of it. As a result, what is commonly referred to as comprehension refers to the cognitive act of reconstructing the meaning of the text through the process of slots-instantiation (schema) employing concepts from both the reading text at hand as well as ideas previously present in our cognitive structure until complete comprehension is achieved. In fact, one cannot speak of comprehending a text until all of the information in the section has been pieced together as one whole message that corresponds to the component elements of the readers' schematic knowledge and completely matches the author's intended message.

Several reading researchers and specialists have attempted to demonstrate the significant relationship between comprehension and schemata through actual evidence. A set of experiments conducted by Carrel and Eisterhold (1988) serve as an example. They provided their subjects with a reading passage "story of a policeman" who put his hand up and stopped the car. The pupils were invited to read the story and see what they could come up with.

Following their findings, this story has been observed to have been assigned two fundamentally different interpretations depending on which schemata the readers activated. The first interpretation, which is also the most likely, depicts a traffic official waving the car driver to come to a halt. As a result, the importance of schemata, in this case, is clear, as the meaning is hinted by the writer and inferred by the subjects rather than expressed explicitly in the story. The second interpretation is based on Superman's paradigm of “held up his hand and stopped the car without a driver”. This second interpretation, however, was described as highly unlikely, despite its credibility. Not only does the first interpretation appear to be far more logical, credible, and, most all, quite familiar, but the second appears to be a little far-fetched. The reason that the second interpretation is considered fanciful while the first is considered very familiar can be explained by the fact that we contribute more to the reading texts than we receive from them. Or as Clarke and Silberstein point out:

More information is contributed by the reader than the print on the page. That is,

readers understand what they read because they are able to take the stimulus beyond

its graphic representation and assign it membership at the level appropriate group of

concept already stored in their memories (schemata)...The reader brings to the task

aformidable amount of information and ideas, attitudes and beliefs. This knowledge

coupled with the ability to make linguistic predictions, determine the expectations the

reader will develop as he/she reads. (Clarke & Silberstein, 1977, pp.136-137)

Thus, reading comprehension is governed by "...the principle that every input is mapped against some existing schema and that all aspects of that schema must be compatible with the input information" (Anderson et al., 1977, p.369) before a complete comprehension can be achieved.

## II. STRATEGIES TO ACTIVATE PRIOR KNOWLEDGE IN READING

There are several teaching techniques that help readers use their past information, which improves understanding. The pre-reading phase's main instructional techniques are these. They are various but have a lot of the same significance. To put it another way, no technique is better than the others in terms of how much it encourages the reader to become activated before reading. Some are most effective in triggering readers' prior reading experience with literary literature. Others are generally helpful with ones that provide information. These methods play a key role in determining how prepared students are to tackle a material by drawing on their existing knowledge.

### 2.1 Activating Prior Knowledge through Answering Questions

By posing questions that readers must respond to, the teacher aids in improving reading comprehension. Prior to the beginning of the reading, these queries are presented. The readers will be using their prior knowledge to help them in their quest for solutions. The readers encounter some knowledge that has already been engaged once they are inside the text. As the reader becomes aware of how much he already knows about the text, he has the confidence to focus on what he perceives as being novel. This should speed up reading and help the reader concentrate so that the content is thoroughly processed. These questions' primary purpose is to prompt the reader to make educated guesses regarding the text's structure, substance, beginning, and conclusion. These queries can be used to direct the reader while they are reading as well (Labiod, 2017).

### 2.2 Activating Background Knowledge through KWL Strategy

Ogle developed the KWL method in 1987. A three-step learning process is used. According to Ogle, OMalley, and Chamot (1990: 170), this method is applied. Three columns make up the chart that is presented to the learner. The learner includes what he already knows about the subject in the first column. In other words, he is activating his existing knowledge in this first phase. The learner asks questions about items he wants to know in the second column. The learner and after are listed in the third column. Interacting with new input indicates what he has captured as new knowledge to be built on what he had previously stored. This strategy is viewed as a collection of strategies. The first involves the activation of pre-existing knowledge frames. The student utilizes the second approach to focus his attention on what he is trying to learn. In the final stage, the learner employs a third technique, which is a form of summary, to determine what he has gained as new knowledge (Labiod, 2017).

### 2.3 Activating Prior Knowledge through Prediction

Prediction and anticipation, which are used interchangeably, are effective strategies for activating readers' prior knowledge before and during reading; DeLeew and Many (1965: 118) state that: "*anticipation means that the readers' mind is ahead of his reading, preparing the way.*" In other words, the reader puts hypotheses or states guesses before and while reading in an attempt to prepare himself for confirmations of these hypotheses as he begins and continues reading.

Readers' predictions are based on existing knowledge. When the reader makes assumptions about what he will find in the text, he is activating and bringing to the surface previously held knowledge. This knowledge is proven or disproved in the form of alternatives, and is then either expanded and saved, or replaced and changed. If the reader has little knowledge of the subject matter of the book, prediction is unlikely to occur (Labiod, 2017).

This strategy ensures that the reader will actively participate in the reading. He never just depends on the text; he also draws from his own memory and creates connections to increase understanding. The reader will be best motivated to read the text using this strategy. According to (Dutta, 1994), reading instructors should encourage students to have good reactions to the texts they would be reading because this will make them more motivated to do so. This assistance consists of giving them engaging tasks designed to foster an open state of mind.

One crucial component that helps with prediction and thus activates prior knowledge is the title. Typically, it

provides a summary of the text's main points. The key is typically what unlocks the text door. According to (Dutta, 1994), the title aids the reader in setting expectations on the theme or subject of the piece. He recognizes that a teacher who gives his students a work's title but no actual text is offering them a helpful exercise to activate their existing knowledge in order to get ready to read.

The reader's prior knowledge storage, intelligence, and creativity all play a role in how successfully he or she uses the title as a tactic to activate knowledge and make predictions. It's challenging for readers of implicitly stated titles to languages spoken in other countries. They specifically request cultural competency which they have relatively mastered (Labiod, 2017).

The usage of key words is another technique employed in prediction to draw on readers' past knowledge. It's conceivable that some elements of the text will be reflected in the author's choice of terminology or lexis. Key words are terms that are important in a text. To put it another way, they aid in foreshadowing the text's main idea Labiod (2017). According to (Dutta, 1994), the key words can be used by the teacher to assist students anticipate what will be in the book since they give a sense of the world that the work is set in. He might offer a list of the text's major words and ask readers to indicate what those words' primary meanings are. This is perhaps a useful practice that helps the activation of prior information.

#### **2.4 Activating Prior Knowledge through Debate and Discussion**

Debate and discussion are two strategies for triggering readers' preexisting knowledge. Before entering the text's universe, readers participate in a class or group debate about its theme. This is a very helpful tactic that enables readers to share their knowledge (Labiod, 2017). According to Effective Reading Instruction (2006), a reader who is unfamiliar with the subject of the book will likely benefit from debate and be better equipped to read it. Each reader will therefore be focused on enlarging his schema while also learning from the experiences of other readers. The majority of the group will read with their past knowledge active, and a large percentage will succeed with the content.

As stated by Nuttall (1982, p.138), "debating is a good way of involving the student with the topic and exposing him to different points of view." debate continues to play a crucial part in education. The reader is likely to read with an internal will to continue that after being awakened. Debating engages the reader, replicates him, and piques his innate interest, in other words. In this way, you can prepare for an efficient reading experience.

#### **2.5 Activating Prior Knowledge through Semantic Mapping**

Semantic mapping is described by Dubin and Bycina (1991) as a word association activity. This technique begins with readers pouring out all of their thoughts on the subject of the book. On the board, these concepts are written down. The third phase involves organizing the information that has been written on the board into a map, a visual organizer, or a graphic organizer with the intention of connecting concepts to one another and describing the types of connections that exist between them. This strategy works well for improving reading comprehension and activating preexisting information.

The strategy's initial stage is essentially a task to activate prior knowledge. Readers try to infer everything related to the text's content from their already-existing stores. The creation of visual organizers then enables readers to consider prior knowledge and classify it according to preexisting schema (Labiod, 2017). What is more is that semantic mapping helps readers organize their ideas first on the board before moving on to that in their thoughts. As Zaid (1995) argues, "Students who use semantic mapping manifest considerable improvement in reading comprehension, written expression, and vocabulary development" (p.6). this is likely to enhance students in information processing and in accelerating their language learning. The reader is introduced to new language through the semantic map, most likely encountered in the text. In addition, thoughts and concepts are brought forward and connected. The process of understanding the material will therefore probably be simpler.

#### **2.6 Activating Prior knowledge through Advance Organizers**

Advance organizers support the activation of prior knowledge to improve reading comprehension. According to Anderson and Pearson (1988), an advance organizer is recommended when texts are implicit and readers have comprehension issues. A non-explicit text will probably get the reader into trouble. He won't know which of his prior knowledge relates to the text's theme, which makes it difficult or impossible for him to understand. An advance organizer is provided to the reader before they begin reading to aid in their comprehension of the material. The reader may see which parts of his preexisting stores are triggered to make the implicit information easier to understand by looking at this statement, which is probably beneficial. The key that unlocks the door to understanding and learning from the material is, therefore, an advance organizer (Labiod, 2017).



## 2.7 Activating Prior Knowledge through Previewing

Pre-reading activities that help to activate prior knowledge include previewing. The text's title, organization, and images are crucial components of this pre-reading exercise. It is expected of the reader to scan them rapidly and hazard educated assumptions regarding the text's subject matter. They act as a form of stimulation, encouraging the readers' pertinent prior knowledge to surface and be used to help them digest the text (Labiod, 2017).

With literary texts, previewing is typically done as a pre-reading practice. If the teacher gives the students a previewing exercise, it will help the readers' comprehension the most. Before reading a piece, the reader can improve his comprehension by reading the author's biography. Themes and writing style are reflections of the author's life. Thus, biographical information aids in readers' anticipation of the text's setting (Labiod, 2017). In addition, pre-readings regarding the text's setting can also help in placing the text in its proper context. When reading a work of black fiction, the reader will likely benefit from historical studies on slavery in the United States, racism and segregation of whites and blacks, and a broad understanding of the country's geography (Labiod, 2017).

## 2.8 Activating Prior Knowledge through Brainstorming

Another technique that may be useful in triggering preexisting knowledge is brainstorming. In most pre-reading prior knowledge activation methodologies, it serves as the starting point. With the aid of this technique, the reader is likely to bring anything that is now floating around in his head that he may believe is relevant to the text's subject. The practice of triggering the readers' preexisting schemas is essentially at the heart of this strategy (Labiod, 2017).

The term "brainstorming" has, according to Isaksen (1998), a number of different interpretations. It's viewed as a gathering when individuals engage in discussion with one another in an effort to contribute ideas. For some people, coming up with ideas is the same as brainstorming. So, once fresh thoughts are required, it is advised to hold a brainstorming session. The practice of triggering the readers' preexisting schemas is essentially at the heart of this strategy ; additionally, this activity allows you to express your creativity in any area you choose. Additionally, it offers a technique to solve issues in any field. That is to say, a group that is having trouble managing their work is likely to find a solution by setting up a brainstorming session (Labiod, 2017).

What is vital in brainstorming is to bring as many ideas as possible. In other words, readers must encourage so many ideas from their previously existing stores, with no regard for their quality but only for their quantity. When too many ideas are brought to the surface, the benefits of brainstorming are maximized. That is, as long as we have a large amount of brainstorming material, our chances of coming up with useful ideas are higher (Labiod, 2017). Feather (2004) stated that "brainstorming provides plenty of materials for making prediction" (p.82).

By using this strategy, the reader is more likely to be aware of what he understands about the topic of a given book before continuing to read it. According to Feather (2004), what is recorded in front of readers' eyes as thoughts or vocabulary items helps them remember what was said, build on it, correct or alter it themselves. Furthermore, brainstorming serves to activate the reader's schema globally in the sense that they will be aware in advance of the concepts, vocabulary, culture, grammatical elements, and genre structures that will most likely be encountered in the text to be read (Labiod, 2017).

Brainstorming also helps to ensure reader engagement. It stimulates readers by inviting incentive. The reason for this is that people can express themselves openly without fear of being blocked, as Bligh (2000) argues "it aims to unblock repressed thoughts"(p.220). To put it differently, the readers are given the confidence to say what they are afraid to say. Furthermore, this technique is built on group involvement, which ensures contact between members. This connection produces an eager atmosphere, which aids in bringing or boosting readers' interest in reading. Furthermore, brainstorming states a reason for reading. According to Feathers (2004), after recording the brainstormed ideas in a list, readers begin reading and verifying if what was brainstormed is correct or incorrect. As a result, kids will be reading with a goal in mind. The latter primarily assists in focusing attention, speeding up reading, and improving reading comprehension.

## III. CONCLUSION

Prior knowledge activation is a crucial aspect of effective learning and comprehension. When individuals engage in reading, they use their existing knowledge and experiences to make sense of the new information presented in the text. However, not all readers possess the necessary strategies to activate their prior knowledge effectively.

The use of effective reading strategies plays a significant role in facilitating prior knowledge activation. These strategies help readers connect new information with what they already know, enhancing their understanding and retention of the material. By employing various techniques

such as previewing, questioning, summarizing, and making connections, readers can actively engage with the text and activate relevant prior knowledge.

It becomes clear that Prior knowledge activation is critical since it provides the foundation for learning new information. When we engage our prior knowledge, we are simply recovering relevant information and experiences from our memory that are related to the current topic. This retrieval process not only helps us connect what we already know with what we are learning, but it also enhances comprehension and retention of new knowledge.

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